

REMARKS

In light of the following remarks, reconsideration of the present application is respectfully requested. Claims 1-3, 6, 8-15, 17-18 and 21-23 are pending.

Priority

Applicant appreciates the Examiner's acknowledgment that all certified copies of the priority documents have been received.

Drawings

The drawings filed on February 28, 2006 have been accepted by the Examiner.

Information Disclosure Statements

Applicants appreciate the Examiner's consideration of the references cited in the Information Disclosure Statement filed on February 28, 2006. Furthermore, Applicants note that the Examiner has considered all but two of the references cited in the IDS filed on March 27, 2006. More specifically, the Examiner has not acknowledged consideration of DE 100 47 314 and DE 195 42 605, which were cited in the Information Disclosure Statement filed on March 27, 2006.

Accordingly, Applicants respectfully request that the Examiner acknowledge consideration of DE 100 47 314 and DE 195 42 605 in the next Office communication or provide a reason why these references were not considered.

Rejections under 35 U.S.C. § 103¹

1. Claims 15-16, 19-20, 22, 27-29, 1-5, 7, 9-10, 14 and 24-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer et al. (US 6,556,695), hereinafter "Packer," in view of Leiper (US 6,128,002). Applicants traverse this rejection.

Claim 15 requires, inter alia, a registration module designed for automatic correlation "by surface matching the 3D surface profile from the 3D image data to a 3D surface profile from the 3D mapping data." At least this feature is not disclosed or suggested by Packer, Leiper or a combination of the two (assuming they could be properly combined, which Applicants do not admit).

Packer discloses a method for producing high resolution real-time images. The method includes, as recited in col. 2, lines 19-26,

acquiring image data of the subject anatomy and reconstructing an image which is a high resolution model of the subject anatomy; performing a medical procedure in which the subject anatomy is imaged in real-time by acquiring low resolution images at a high frame rate; registering the high resolution model of the subject anatomy with each acquired low resolution image; and displaying to the physician in real-time images of the registered high resolution model of the anatomy.

An activation map is created by detecting basket electrodes 268 in acquired ultrasonic images. The locations of the electrodes 268 are registered with a high resolution image. "This is done by aiming the ultrasonic transducer 30 at each electrode 268, placing a cursor on an electrode pictured in the image, and typing in the electrode number."²

Thus, the positions of the electrodes 268 are first manually registered to the low resolution image.

¹ To be thorough, further expedite prosecution, and for the sake of clarity, Applicants provide discussions of each of the references separately, however, Applicants are not attacking these references individually, but arguing that the references, even taken in combination, fail to render the claimed invention obvious because all features of the claims are not found in the prior art.

² Col. 12, lines 52-61 of Packer.

The Examiner relies on the registering step of Packer to teach the "registration module" of claim 15. However, the electrodes 268 of Packer are first manually registered. Accordingly, Packer fails to disclose or suggest a registration module designed for "automatic correlation," as required by claim 15. Since Packer fails to disclose or suggest "automatic correlation", Packer does not discuss or suggest a registration module designed for automatic correlation "by surface matching the 3D surface profile from the 3D image data to a 3D surface profile from the 3D mapping data."

Applicants have amended claim 15 to further differentiate the differences between Packer.

Even assuming for the sake of argument that Packer and Leiper could be properly combined (which Applicants do not admit), Leiper fails to cure the above-discussed deficiencies of Packer. Therefore, claim 15 is not rendered obvious by Packer and Leiper. Claim 22, which is dependent on claim 15, is patentable for at least the reasons set forth above.

Claim 1 is a separate independent claim from claim 15, wherein claim 1 contains its own individual limitations. Each independent claim should be interpreted solely based upon limitations set forth therein. However, claim 1 is patentable for at least reasons somewhat similar to those set forth above regarding claim 15. Claims 2-3, 9-10 and 14 are patentable based at least on their dependency on claim 1.

Claims 4-5, 7, 16, 19-20 and 24-29 are cancelled without any disclaimer of the subject matter contained therein, thereby rendering the rejection of claims 4-5, 7, 16, 19-20 and 24-29 moot.

Therefore, Applicants respectfully request that the rejections of claims 15-16, 19-20, 22, 27-29, 1-5 7, 9-10, 14 and 24-26 under 35 U.S.C. § 103 be withdrawn.

2. Claims 17-18, 21, and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Hemler et al. (A System for Multimodality Image Fusion), hereinafter “Hemler,” and further in view of Williams et al. (DE 19953308-A1), hereinafter “Williams.”

The Examiner correctly acknowledges that the features of claims 17-18, 21, and 6 are absent from Packer, but alleges that these features are taught by Hemler and Williams, thereby rendering claims 17-18, 21, and 6 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claims 17-18, 21, and 6 are taught by Hemler and Williams (which Applicants do not admit) and that Hemler and Williams could be properly combined with Packer (which Applicants do not admit), Packer, Hemler and Williams are still deficient with respect to the above-described features of claims 15 and 1. Thus, even in combination, Packer, Hemler and Williams fail to render claims 17-18, 21, and 6 obvious.

Therefore, Applicants respectfully request that the rejections of claims 17-18, 21, and 6 under 35 U.S.C. § 103 be withdrawn.

3. Claims 23 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Leiper and further in view of Hughes et al. (US 7,233,340), hereinafter “Hughes.”

The Examiner correctly acknowledges that the features of claims 23 and 13 are absent from Packer and Leiper, but alleges that these features are taught by Hughes, thereby rendering claims 23 and 13 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claims 23 and 13 are taught by Hughes (which Applicants do not admit) and that Hughes could be properly combined with Packer and Leiper (which Applicants do not admit),

Packer, Leiper and Hughes are still deficient with respect to the above-described features of claims 15 and 1. Thus, even in combination, Packer, Leiper and Hughes fail to render claims 23 and 13 obvious.

Therefore, Applicants respectfully request that the rejections of claims 23 and 13 under 35 U.S.C. § 103 be withdrawn.

4. Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Leiper and further in view of Schweikard et al. (US 6,144,875), hereinafter “Schweikard.”

The Examiner correctly acknowledges that the features of claim 8 are absent from Packer and Leiper, but alleges that these features are taught by Schweikard, thereby rendering claim 8 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claim 8 are taught by Schweikard (which Applicants do not admit) and that Schweikard could be properly combined with Packer and Leiper (which Applicants do not admit), Packer, Leiper and Schweikard are still deficient with respect to the above-described features of claim 1. Thus, even in combination, Packer, Leiper and Schweikard fail to render claim 8 obvious.

Therefore, Applicants respectfully request that the rejection of claim 8 under 35 U.S.C. § 103 be withdrawn.

5. Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer in view of Leiper and further in view of Krishnan (US 6,771,262).

The Examiner correctly acknowledges that the features of claim 11 are absent from Packer and Leiper, but alleges that these features are taught by Krishnan, thereby rendering claim 11 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claim 11 are taught by

Krishnan (which Applicants do not admit) and that Krishnan could be properly combined with Packer and Leiper (which Applicants do not admit), Packer, Leiper and Krishnan are still deficient with respect to the above-described features of claim 1. Thus, even in combination, Packer, Leiper and Krishnan fail to render claim 11 obvious.

Therefore, Applicants respectfully request that the rejection of claim 11 under 35 U.S.C. § 103 be withdrawn.

6. Claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Packer et al. in view of Leiper and further in view of Massaro et al. (US 2002/0087329), hereinafter “Massaro.”

The Examiner correctly acknowledges that the features of claim 12 are absent from Packer and Leiper, but alleges that these features are taught by Massaro, thereby rendering claim 12 obvious to one of ordinary skill at the time of the invention. Even assuming *arguendo* that the features of claim 12 are taught by Massaro (which Applicants do not admit) and that Massaro could be properly combined with Packer and Leiper (which Applicants do not admit), Packer, Leiper and Massaro are still deficient with respect to the above-described features of claim 1. Thus, even in combination, Packer, Leiper and Massaro fail to render claim 12 obvious.

Therefore, Applicants respectfully request that the rejection of claim 12 under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

In view of the above remarks and amendments, the Applicants respectfully submit that each of the pending objections and rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Donald J. Daley at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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By


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